

4205 Glossary

4206 Aerosols

4207 tiny particles suspended in the air

4208

4209 Anthropogenic

4210 human-induced

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4212 Attribution

4213 attribution of causes of climate change is the process of establishing the most likely

4214 causes for a detected change with some defined level of confidence

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4216 Black carbon

4217 soot particles primarily from fossil fuel burning

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4219 Climate sensitivity

4220 the equilibrium change in global-average surface air

4221 temperature following a change in radiative forcing; in

4222 current usage, this term generally refers to the warming

4223 that would result if atmospheric carbon dioxide

4224 concentrations were to double from their pre-industrial

4225 levels

4226

4227 Cold wave

4228 cold spells of 4 days in duration with mean temperature falling below the threshold for a

4229 1 in 10 year recurrence interval

4230

4231 Cyclone

4232 a storm system that rotates around a center of low atmospheric pressure

4233

4234 Tropical cyclone

4235 a cyclone usually originating in the tropics, with a warm central core

4236

4237 Extratropical cyclone

4238 a cyclone originating in the mid or high latitudes, with a cold central core. Larger

4239 in scale than a tropical cyclone and with less central intensity

4240

4241 Diurnal temperature range

4242 the difference between maximum and minimum temperature over a period of 24 hours

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4244 El Nino-Southern Oscillation

4245 the waxing and waning every 2-7 years of El Niño and La Niña ocean temperature cycles

4246 along with the related atmospheric pressure component of the Southern Oscillation. The

4247 primary centers of ENSO variability are in the tropical Pacific, but ENSO effects can be

4248 felt across much of the globe

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4250 Forcing

4251 a natural or human-induced factor that influences climate

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4253 Greenhouse gases

4254 gases including water vapor, carbon dioxide, methane,
4255 nitrous oxide, and halocarbons that trap infrared heat,
4256 warming the air near the surface and in the lower levels
4257 of the atmosphere

4258

4259 Heat wave

4260 warm spells of 4 days in duration with mean temperature exceeding the threshold for a 1
4261 in 10 year recurrence interval

4262

4263 Inhomogeneity

4264 a break or interruption in an otherwise homogeneous record. For example, moving a
4265 weather station from the center of a city to the suburbs will create an inhomogeneity in
4266 the climate record

4267

4268 Monsoon

4269 a seasonal change in wind direction (driven by changes in temperature), often
4270 accompanied by a seasonal precipitation maximum

4271

4272 Parameterization

4273 a mathematical representation of a process that cannot
4274 be explicitly resolved in a climate model

4275

4276 Stratosphere

4277 the highly stratified region of the atmosphere above the troposphere extending from about
4278 10 km (ranging from 9 km in high latitudes to 16 km in the tropics on average) to about
4279 50 km

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4281 Troposphere

4282 the lowest part of the atmosphere from the surface to about 10 km in altitude in mid-
4283 latitudes (ranging from 9 km in high latitudes to 16 km in the tropics on average) where
4284 clouds and “weather” phenomena occur, in the troposphere, temperatures generally
4285 decrease with height

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